

## CLAIMS

What is claimed is:

- 1 1. A method, comprising:  
2 receiving a media clock signal;  
3 creating a capture pulse to synchronize the media clock signal with a  
4 memory clock signal;  
5 capturing media data at a transition of the capture pulse; and  
6 storing the media data in a synchronous memory.
- 1 2. The method of claim 1 further comprising scheduling to store the media data in  
2 the synchronous memory.
- 1 3. The method of claim 2 wherein scheduling to store the media data comprises  
2 initiating a signal based upon a capture pulse.
- 1 4. The method of claim 1 further comprising multiplexing to store the media data in  
2 the synchronous memory.
- 1 5. The method of claim 4 wherein multiplexing to store the media data comprises  
2 receiving a write select signal to store the media data.
- 1 6. The method of claim 1 wherein said receiving a media clock signal comprises  
2 receiving a clock signal of a queue comprising data to capture.
- 1 7. The method of claim 1 wherein said creating a capture pulse to synchronize the  
2 media clock signal comprises creating a capture pulse with asynchronous logic.
- 1 8. The method of claim 1 wherein said creating a capture pulse to synchronize the  
2 media clock signal comprises creating a capture pulse to synchronize the media  
3 clock signal with a transition of the memory clock signal.



- 1 11. An apparatus, comprising:  
2 a synchronizer; and  
3 a buffer coupled to said synchronizer; and  
4 a synchronous memory coupled to said buffer.
- 1 12. The apparatus of claim 11, further comprising a multiplexer coupled to more than  
2 one buffer.
- 1 13. The apparatus of claim 11, further comprising a scheduler coupled to said  
2 synchronous memory.
- 1 14. The apparatus of claim 11, further comprising an inbound register coupled to said  
2 buffer.
- 1 15. The apparatus of claim 11, wherein said synchronizer comprises an asynchronous  
2 state machine.
- 1 16. The apparatus of claim 11, wherein said buffer comprises a buffer to capture data  
2 from an inbound register.
- 1 17. The apparatus of claim 11, wherein said synchronous memory comprises a  
2 synchronous random access memory.
- 1 18. The apparatus of claim 11, wherein said synchronous memory comprises memory  
2 to store data from an inbound register.

- 1 19. A system, comprising:  
2 a host;  
3 a deep memory node coupled to said host; and  
4 a physical layer device coupled to said deep memory node.
- 1 20. The system of claim 19, wherein said host comprises a host to initiate a large  
2 packet transaction.
- 1 21. The system of claim 19, wherein said deep-memory node comprises:  
2 a synchronizer; and  
3 a buffer coupled to said synchronizer; and  
4 a synchronous memory coupled to said buffer.
- 1 22. The system of claim 19, wherein said deep-memory node comprises a  
2 synchronous memory to handle a large-packet transaction.
- 1 23. The system of claim 19, wherein said target device comprises a physical layer  
2 device to respond to a large-packet transaction.

- 1     24.     A machine-readable medium containing instructions, which when executed by a  
2             machine, cause said machine to perform operations, comprising:  
3                 receiving a media clock signal;  
4                 creating a capture pulse to synchronize the media clock signal with a  
5                 memory clock signal;  
6                 capturing media data at a transition of the capture pulse; and  
7                 storing the media data in a synchronous memory.
- 1     25.     The machine-readable medium of claim 24 further comprising scheduling to store  
2             the media data in the synchronous memory.
- 1     26.     The machine-readable medium of claim 24 further comprising multiplexing to  
2             store the media data in the synchronous memory.
- 1     27.     The machine-readable medium of claim 24 wherein said creating a capture pulse  
2             to synchronize the media clock signal comprises creating a capture pulse with  
3             asynchronous logic.
- 1     28.     The machine-readable medium of claim 24 wherein said creating a capture pulse  
2             to synchronize the media clock signal comprises creating a capture pulse to  
3             synchronize the media clock signal with a transition of the memory clock signal.
- 1     29.     The machine-readable medium of claim 24 wherein said capturing data at a  
2             transition of the capture pulse comprises capturing data from a queue.
- 1     30.     The machine-readable medium of claim 24 wherein said storing the data in a  
2             synchronous memory comprises writing a memory word to the synchronous  
3             memory.